

REMARKS

The Office Action dated April 6, 2005 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1 and 9 have been amended further defining the features of the present invention, claims 11-13 have been amended to improve clarity of the features recited therein, and new claims 17-21 have been added further defining the scope of the present invention. Support for the amended recitations of independent claims 1 and 9, and included in independent claim 17, may be found, for instance, on page 11, lines 5-10, of the Specification of the present invention. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1-37 and 39-70 be found allowable as reciting patentable subject matter.

Claims 1-21 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, claims 1, 5, 6, 7, 9, 13, 14, and 15 were rejected under 35 U.S.C. § 102 as being anticipated by U. S. Patent No. 5,615,364 to Marks ("Marks"). The Office Action took the position that Marks describes all the recitations of independent claims 1 and 9 and related dependent claims. This rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claims 2-8 are dependent, recites a method for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application. The device has an active processor system and a standby processor system. The method includes maintaining a checksum for each record in an active database located in the active processor system, checking the checksum during initialization, providing an identical standby copy of an active database located on the active processor system, on the standby processor system, and monitoring the active processor for a failure, assuming control by the standby processor system assumes control when the failure is detected. The switching from the active database to the standby database is transparent to the external application.

Independent claim 9, upon which claims 10-16 are dependent, recites a system for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application, the device having an active processor system and a standby processor system. The system includes checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization, standby means for providing an identical standby copy of an active database located on the active processor system, on the standby processor system, monitor means for monitoring the active processor for a failure, control means for assuming control by the standby processor system assumes control when the failure is detected. The switching from the active database to the standby database is transparent to an external application.

Independent claim 17, upon which claims 18-21 are dependent, recites a device providing persistency fault tolerant data stored in a database and having an active processor system and a standby processor system. The device includes a checksum unit maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization, and a standby unit providing an identical standby copy of an active database located on the active processor system, on the standby processor system. The device also includes a monitor unit monitoring the active processor for a failure, and a control unit assuming control by the standby processor system assumes control when the failure is detected wherein switching from the active database to the standby database is transparent to an external application.

As will be discussed below, the cited reference of Marks fails to disclose or suggest the elements of any of the presently pending claims.

Marks generally describes a redundant system which makes a backup database invisible or transparent to the user and which automatically accomplishes synchronization without any special effort on the part of the user. See column 2, lines 6-10. Marks generally describes primary and backup database operation. Upon changes to the database, the primary and backup communication agents communicate with each other to automatically update the backup database. See column 3, lines 1-15. If malfunction occurs, the backup database takes over. See column 3, lines 15-20.

Also, Marks describes that backup communications are synchronized to primary communications without any manual initialization or reinputting of any data. See column 4, lines 59-63.

However, Marks fails to teach or suggest, “maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claims 1 and 9. Although it appears that Marks is limited to providing that a backup database may be transparent, Marks is silent as to teaching or suggesting that the redundant networked database system described therein maintains a checksum for each record in an active database and checking the checksum during initialization. No description is provided in Marks suggesting such features. Accordingly, Applicants respectfully assert that Marks fails to teach or suggest all the recitations of independent claims 1 and 9.

One of the many advantages of maintaining a checksum and checking the checksum during initialization is that it guarantees efficiency and makes failover transparent. See page 11, lines 5-10, of the present Specification. Marks does not provide for the checksum as in the present invention. For similar reasons, Marks fails to teach or suggest, “checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claim 9, and “a checksum unit maintaining a

checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claim 17.

Accordingly, in view of the foregoing, it is respectfully requested that independent claims 1, 9, and 17 and related dependent claims be allowed.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 3, claims 2-4 and 10-12 were rejected under 35 U.S.C. § 103 as being unpatentable over Marks and U.S. Patent No. 6,411,969 to Tam (“Tam”). The Office Action took the position that Marks and Tam disclose all the aspects of dependent claims 2-4 and 10-12. This rejection is traversed and reconsideration is requested.

Dependent claims 2-4 depend from independent claim 1 and dependent claims 10-12 depend from independent claim 9. Also, dependent claims 18-21 depend from independent claim 17. Because the combination of Marks and Tam must teach all the recitations of the base claim and any intervening claims of the dependent claims, the arguments presented above supporting the patentability of independent claims 1, 9, and 17 over Marks are incorporated herein.

Tam generally describes a method for developing back-up copies of a source database by providing incremental and accumulate dump commands from various multiple-Users which enable a selection of certain files which are identified independently of time-factor for dumping selectively either onto a separate destination

medium of disk or tape. However, similarly to Marks, Tam does not teach or suggest, at least, “maintaining a checksum for each record in an active database located in the active processor system; checking the checksum during initialization,” as recited in independent claims 1 and 9.

Although Tam provides that a compare operation is performed, in which a set of steps that is performed by DMUTILITY after each backup session to validate that the data saved on disk or tape is free from block checksum, nothing in Tam describes that the enhanced system described therein includes an operation to maintain a checksum for each record in an active database located in the active processor system and that the checksum is performed during initialization. See column 8, lines 52-63.

In addition, nothing in Tam describes that switching from an active database to a standby database is transparent to an external application. Instead, Tam provides a different application of reducing total back-up time of data.

The descriptions of the system and method of Marks and Tam do not broach the concept of providing a method and apparatus to maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization, in accordance with an aspect of the present invention. Thus, even if Marks and Tam are combined as proposed in the Office Action, Applicants respectfully assert that a combination thereof would fail to teach or suggest all the recitations of independent claim 1, for instance, “maintaining a checksum for each record in an active

database located in the active processor system,” and “checking the checksum during initialization.”

For similar reasons, Marks and Tam fail to teach or suggest, “checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claim 9, and “a checksum unit maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claim 17.

Accordingly, in view of the foregoing, it is respectfully requested that independent claims 1, 9, and 17 and related dependent claims be allowed.

In the Office Action, at page 4, claims 8 and 16 were rejected under 35 U.S.C. § 103 as being unpatentable over Marks, U.S. Patent No. 5,317,742 to Bapat (“Bapat”), and publication “Structure of Management Information Version 2(SMIV2)” by McCloghrie et al. (“McCloghrie”). The Office Action took the position that a combination of Marks, Bapat, and McCloghrie disclose all the aspects of dependent claims 8 and 16. This rejection is traversed and reconsideration is requested.

Dependent claim 8 depends from independent claim 1 and dependent claim 16 depends from independent claim 9. Because the combination of Marks and Tam must teach, individually or combined, all the recitations of the base claim and any intervening

claims of dependent claims 2-4 and 10-12, the arguments presented above supporting the patentability of independent claims 1 and 9 over Marks are incorporated herein.

Bapat generally describes a Structure of Management Information (SMI) translated to a schema definition which is used to design the formats and templates of data structures within a database, within which actual information content will be stored. See column 7, lines 59-64. In turn, McCloghrie generally describes Internet protocol standards. However, Bapat and McCloghrie do not cure the deficiencies of Marks and, a combination thereof fails to teach or suggest all the recitations of independent claims 1 and 9. For instance, Bapat and McCloghrie are silent as to teaching or suggesting, for instance, “maintaining a checksum for each record in an active database located in the active processor system; checking the checksum during initialization,” as recited in independent claim 1 and “checksum means for maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization,” as recited in independent claim 9.

A combination of Marks, Bapat, and McCloghrie would be devoid of any teaching or suggestion providing the checksum recitations of independent claims 1 and 9. Thus, Applicants respectfully assert that a combination of Marks, Bapat, and McCloghrie fails to teach or suggest all the recitations of independent claims 1 and 9.

One of the many advantages of the system and method of the present invention is that it provides a checksum and a check of the checksum during initialization to

guarantee efficiency and make failover transparent. None of the references cited provide such advantage.

Accordingly, in view of the foregoing, it is respectfully requested that independent claims 1 and 9 and related dependent claims 8 and 16 be allowed.

CONCLUSION:


In view of the above, Applicants respectfully submit that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants further submit that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicants therefore respectfully request that each of claims 1-21 be found allowable and that this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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